SEQUENCE LISTING

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<120> Novel Adaptor Protein that Binds to Mammalian Toll-Like Receptor 3, and Gene Thereof

<130> 1035-591 / A211-02/US

<140> US 10/536,802
<141> 2005-09-22

<150> PCT/JP2003/014854
<151> 2003-11-20

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ggt gca gca ggc cag gac aag ctc ttg tat ctg aag cac aaa ctg aag 155
Gly Ala Ala Gly Gln Asp Lys Leu Leu Tyr Leu Lys His Lys Leu Lys
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acc cca cgc cca ggc tgc cag ggg cag gac ctc ctg cat gcc atg gtt 203
Thr Pro Arg Pro Gly Cys Gln Gly Gln Asp Leu Leu His Ala Met Val
35 40 45

ctc ctg aag ctg ggc cag gaa act gag gcc agg atc tct cta gag gca 251
Leu Leu Lys Leu Gly Gln Glu Thr Glu Ala Arg Ile Ser Leu Glu Ala
50 55 60

ttg aag gcc gat gcg gtg gcc cgg ctg gtg gcc cgc cag tgg gct ggc 299
Leu Lys Ala Asp Ala Val Ala Arg Leu Val Ala Arg Gln Trp Ala Gly
65 70 75

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gtg gac agc acc gag gac cca gag gag ccc cca gat gtg tcc tgg gct   347
Val Asp Ser Thr Glu Asp Pro Glu Glu Pro Pro Asp Val Ser Trp Ala
 80                  85                  90                  95

gtg gcc cgc ttg tac cac ctg ctg gct gag gag aag ctg tgc ccc gcc   395
Val Ala Arg Leu Tyr His Leu Leu Ala Glu Glu Lys Leu Cys Pro Ala
            100                 105                 110

tcg ctg cgg gac gtg gcc tac cag gaa gcc gtc cgc acc ctc agc tcc   443
Ser Leu Arg Asp Val Ala Tyr Gln Glu Ala Val Arg Thr Leu Ser Ser
        115                 120                 125

agg gac gac cac cgg ctg ggg gaa ctt cag gat gag gcc cga aac cgg   491
Arg Asp Asp His Arg Leu Gly Glu Leu Gln Asp Glu Ala Arg Asn Arg
    130                 135                 140

tgt ggg tgg gac att gct ggg gat cca ggg agc atc cgg acg ctc cag   539
Cys Gly Trp Asp Ile Ala Gly Asp Pro Gly Ser Ile Arg Thr Leu Gln
145                 150                 155

tcc aat ctg ggc tgc ctc cca cca tcc tcg gct ttg ccc tct ggg acc   587
Ser Asn Leu Gly Cys Leu Pro Pro Ser Ser Ala Leu Pro Ser Gly Thr
160                 165                 170                 175

agg agc ctc cca cgc ccc att gac ggt gtt tcg gac tgg agc caa ggg   635
Arg Ser Leu Pro Arg Pro Ile Asp Gly Val Ser Asp Trp Ser Gln Gly
            180                 185                 190

tgc tcc ctg cga tcc act ggc agc cct gcc tcc ctg gcc agc aac ttg   683
Cys Ser Leu Arg Ser Thr Gly Ser Pro Ala Ser Leu Ala Ser Asn Leu
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gaa atc agc cag tcc cct acc atg ccc ttc ctc agc ctg cac cgc agc   731
Glu Ile Ser Gln Ser Pro Thr Met Pro Phe Leu Ser Leu His Arg Ser
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cca cat ggg ccc agc aag ctc tgt gac gac ccc cag gcc agc ttg gtg   779
Pro His Gly Pro Ser Lys Leu Cys Asp Asp Pro Gln Ala Ser Leu Val
225                 230                 235

ccc gag cct gtc ccc ggt ggc tgc cag gag cct gag gag atg agc tgg   827
Pro Glu Pro Val Pro Gly Gly Cys Gln Glu Pro Glu Glu Met Ser Trp
240                 245                 250                 255

ccg cca tcg ggg gag att gcc agc cca cca gag ctg cca agc agc cca   875
Pro Pro Ser Gly Glu Ile Ala Ser Pro Pro Glu Leu Pro Ser Ser Pro
            260                 265                 270

cct cct ggg ctt ccc gaa gtg gcc cca gat gca acc tcc act ggc ctc   923
Pro Pro Gly Leu Pro Glu Val Ala Pro Asp Ala Thr Ser Thr Gly Leu
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cct gat acc ccc gca gct cca gaa acc agc acc aac tac cca gtg gag   971
Pro Asp Thr Pro Ala Ala Pro Glu Thr Ser Thr Asn Tyr Pro Val Glu
    290                 295                 300
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Cys Thr Glu Gly Ser Ala Gly Pro Gln Ser Leu Pro Leu Pro Ile Leu
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gag ccg gtc aaa aac ccc tgc tct gtc aaa gac cag acg cca ctc caa   1067
Glu Pro Val Lys Asn Pro Cys Ser Val Lys Asp Gln Thr Pro Leu Gln
320                 325                 330                 335

ctt tct gta gaa gat acc acc tct cca aat acc aag ccg tgc cca cct   1115
Leu Ser Val Glu Asp Thr Thr Ser Pro Asn Thr Lys Pro Cys Pro Pro
                340                 345                 350

act ccc acc acc cca gaa aca tcc cct cct cct cct cct cct cct cct   1163
Thr Pro Thr Thr Pro Glu Thr Ser Pro Pro Pro Pro Pro Pro Pro Pro
            355                 360                 365

tca tct act cct tgt tca gct cac ctg acc ccc tcc tcc ctg ttc cct   1211
Ser Ser Thr Pro Cys Ser Ala His Leu Thr Pro Ser Ser Leu Phe Pro
        370                 375                 380

tcc tcc ctg gaa tca tca tcg gaa cag aaa ttc tat aac ttt gtg atc   1259
Ser Ser Leu Glu Ser Ser Ser Glu Gln Lys Phe Tyr Asn Phe Val Ile
    385                 390                 395

ctc cac gcc agg gca gac gaa cac atc gcc ctg cgg gtt cgg gag aag   1307
Leu His Ala Arg Ala Asp Glu His Ile Ala Leu Arg Val Arg Glu Lys
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ctg gag gcc ctt ggc gtg ccc gac ggg gcc acc ttc tgc gag gat ttc   1355
Leu Glu Ala Leu Gly Val Pro Asp Gly Ala Thr Phe Cys Glu Asp Phe
                420                 425                 430

cag gtg ccg ggg cgc ggg gag ctg agc tgc ctg cag gac gcc ata gac   1403
Gln Val Pro Gly Arg Gly Glu Leu Ser Cys Leu Gln Asp Ala Ile Asp
            435                 440                 445

cac tca gct ttc atc atc cta ctt ctc acc tcc aac ttc gac tgt cgc   1451
His Ser Ala Phe Ile Ile Leu Leu Leu Thr Ser Asn Phe Asp Cys Arg
        450                 455                 460

ctg agc ctg cac cag gtg aac caa gcc atg atg agc aac ctc acg cga   1499
Leu Ser Leu His Gln Val Asn Gln Ala Met Met Ser Asn Leu Thr Arg
    465                 470                 475

cag ggg tcg cca gac tgt gtc atc ccc ttc ctg ccc ctg gag agc tcc   1547
Gln Gly Ser Pro Asp Cys Val Ile Pro Phe Leu Pro Leu Glu Ser Ser
480                 485                 490                 495

ccg gcc cag ctc agc tcc gac acg gcc agc ctg ctc tcc ggg ctg gtg   1595
Pro Ala Gln Leu Ser Ser Asp Thr Ala Ser Leu Leu Ser Gly Leu Val
                500                 505                 510

cgg ctg gac gaa cac tcc cag atc ttc gcc agg aag gtg gcc aac acc   1643
Arg Leu Asp Glu His Ser Gln Ile Phe Ala Arg Lys Val Ala Asn Thr
            515                 520                 525
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ttc aag ccc cac agg ctt cag gcc cga aag gcc atg tgg agg aag gaa   1691
Phe Lys Pro His Arg Leu Gln Ala Arg Lys Ala Met Trp Arg Lys Glu
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cag gac acc cga gcc ctg cgg gaa cag agc caa cac ctg gac ggt gag   1739
Gln Asp Thr Arg Ala Leu Arg Glu Gln Ser Gln His Leu Asp Gly Glu
    545                 550                 555

cgg atg cag gcg gcg gca ctg aac gca gcc tac tca gcc tac ctc cag   1787
Arg Met Gln Ala Ala Ala Leu Asn Ala Ala Tyr Ser Ala Tyr Leu Gln
560                 565                 570                 575

agc tac ttg tcc tac cag gca cag atg gag cag ctc cag gtg gct ttt   1835
Ser Tyr Leu Ser Tyr Gln Ala Gln Met Glu Gln Leu Gln Val Ala Phe
                580                 585                 590

ggg agc cac atg tca ttt ggg act ggg gcg ccc tat ggg gct cga atg   1883
Gly Ser His Met Ser Phe Gly Thr Gly Ala Pro Tyr Gly Ala Arg Met
            595                 600                 605

ccc ttt ggg ggc cag gtg ccc ctg gga gcc ccg cca ccc ttt ccc act   1931
Pro Phe Gly Gly Gln Val Pro Leu Gly Ala Pro Pro Pro Phe Pro Thr
        610                 615                 620

tgg ccg ggg tgc ccg cag ccg cca ccc ctg cac gca tgg cag gct ggc   1979
Trp Pro Gly Cys Pro Gln Pro Pro Pro Leu His Ala Trp Gln Ala Gly
    625                 630                 635

acc ccc cca ccg ccc tcc cca cag cca gca gcc ttt cca cag tca ctg   2027
Thr Pro Pro Pro Pro Ser Pro Gln Pro Ala Ala Phe Pro Gln Ser Leu
640                 645                 650                 655

ccc ttc ccg cag tcc cca gcc ttc cct acg gcc tca ccc gca ccc cct   2075
Pro Phe Pro Gln Ser Pro Ala Phe Pro Thr Ala Ser Pro Ala Pro Pro
                660                 665                 670

cag agc cca ggg ctg caa ccc ctc att atc cac cac gca cag atg gta   2123
Gln Ser Pro Gly Leu Gln Pro Leu Ile Ile His His Ala Gln Met Val
            675                 680                 685

cag ctg ggg ctg aac aac cac atg tgg aac cag aga ggg tcc cag gcg   2171
Gln Leu Gly Leu Asn Asn His Met Trp Asn Gln Arg Gly Ser Gln Ala
        690                 695                 700

ccc gag gac aag acg cag gag gca gaa tgaccgcgtg tccttgcctg         2218
Pro Glu Asp Lys Thr Gln Glu Ala Glu
    705                 710

accacctggg gaacacccct ggacccaggc atcggccagg accccataga gcaccccggt 2278

ctgccctgtg ccctgtggac agtggaagat gaggtcatct gccactttca ggacattgtc 2338

cgggagccct tcatttagga caaaacgggc gcgatgatgc cctggctttc agggtggtca 2398

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Pro Arg Pro Gly Cys Gln Gly Gln Asp Leu Leu His Ala Met Val Leu
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Leu Lys Leu Gly Gln Glu Thr Glu Ala Arg Ile Ser Leu Glu Ala Leu
    50   55   60

Lys Ala Asp Ala Val Ala Arg Leu Val Ala Arg Gln Trp Ala Gly Val
65   70   75   80

Asp Ser Thr Glu Asp Pro Glu Glu Pro Pro Asp Val Ser Trp Ala Val
                85   90   95

Ala Arg Leu Tyr His Leu Leu Ala Glu Glu Lys Leu Cys Pro Ala Ser
            100   105   110

Leu Arg Asp Val Ala Tyr Gln Glu Ala Val Arg Thr Leu Ser Ser Arg
        115   120   125

Asp Asp His Arg Leu Gly Glu Leu Gln Asp Glu Ala Arg Asn Arg Cys
    130   135   140

Gly Trp Asp Ile Ala Gly Asp Pro Gly Ser Ile Arg Thr Leu Gln Ser
145   150   155   160

Asn Leu Gly Cys Leu Pro Pro Ser Ser Ala Leu Pro Ser Gly Thr Arg
                165   170   175

Ser Leu Pro Arg Pro Ile Asp Gly Val Ser Asp Trp Ser Gln Gly Cys
            180   185   190

Ser Leu Arg Ser Thr Gly Ser Pro Ala Ser Leu Ala Ser Asn Leu Glu
        195   200   205

Ile Ser Gln Ser Pro Thr Met Pro Phe Leu Ser Leu His Arg Ser Pro
    210   215   220

His Gly Pro Ser Lys Leu Cys Asp Asp Pro Gln Ala Ser Leu Val Pro
225   230   235   240

Glu Pro Val Pro Gly Gly Cys Gln Glu Pro Glu Glu Met Ser Trp Pro
                245   250   255

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Pro Ser Gly Glu Ile Ala Ser Pro Pro Glu Leu Pro Ser Ser Pro Pro
            260                 265                 270

Pro Gly Leu Pro Glu Val Ala Pro Asp Ala Thr Ser Thr Gly Leu Pro
        275                 280                 285

Asp Thr Pro Ala Ala Pro Glu Thr Ser Thr Asn Tyr Pro Val Glu Cys
    290                 295                 300

Thr Glu Gly Ser Ala Gly Pro Gln Ser Leu Pro Leu Pro Ile Leu Glu
305                 310                 315                 320

Pro Val Lys Asn Pro Cys Ser Val Lys Asp Gln Thr Pro Leu Gln Leu
                325                 330                 335

Ser Val Glu Asp Thr Thr Ser Pro Asn Thr Lys Pro Cys Pro Pro Thr
            340                 345                 350

Pro Thr Thr Pro Glu Thr Ser Pro Pro Pro Pro Pro Pro Pro Pro Ser
        355                 360                 365

Ser Thr Pro Cys Ser Ala His Leu Thr Pro Ser Ser Leu Phe Pro Ser
    370                 375                 380

Ser Leu Glu Ser Ser Ser Glu Gln Lys Phe Tyr Asn Phe Val Ile Leu
385                 390                 395                 400

His Ala Arg Ala Asp Glu His Ile Ala Leu Arg Val Arg Glu Lys Leu
                405                 410                 415

Glu Ala Leu Gly Val Pro Asp Gly Ala Thr Phe Cys Glu Asp Phe Gln
            420                 425                 430

Val Pro Gly Arg Gly Glu Leu Ser Cys Leu Gln Asp Ala Ile Asp His
        435                 440                 445

Ser Ala Phe Ile Ile Leu Leu Leu Thr Ser Asn Phe Asp Cys Arg Leu
    450                 455                 460

Ser Leu His Gln Val Asn Gln Ala Met Met Ser Asn Leu Thr Arg Gln
465                 470                 475                 480

Gly Ser Pro Asp Cys Val Ile Pro Phe Leu Pro Leu Glu Ser Ser Pro
                485                 490                 495

Ala Gln Leu Ser Ser Asp Thr Ala Ser Leu Leu Ser Gly Leu Val Arg
            500                 505                 510

Leu Asp Glu His Ser Gln Ile Phe Ala Arg Lys Val Ala Asn Thr Phe
        515                 520                 525

Lys Pro His Arg Leu Gln Ala Arg Lys Ala Met Trp Arg Lys Glu Gln
    530                 535                 540

Asp Thr Arg Ala Leu Arg Glu Gln Ser Gln His Leu Asp Gly Glu Arg
545                 550                 555                 560
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Met Gln Ala Ala Ala Leu Asn Ala Ala Tyr Ser Ala Tyr Leu Gln Ser
                565                 570                 575

Tyr Leu Ser Tyr Gln Ala Gln Met Glu Gln Leu Gln Val Ala Phe Gly
            580                 585                 590

Ser His Met Ser Phe Gly Thr Gly Ala Pro Tyr Gly Ala Arg Met Pro
        595                 600                 605

Phe Gly Gly Gln Val Pro Leu Gly Ala Pro Pro Pro Phe Pro Thr Trp
    610                 615                 620

Pro Gly Cys Pro Gln Pro Pro Pro Leu His Ala Trp Gln Ala Gly Thr
625                 630                 635                 640

Pro Pro Pro Pro Ser Pro Gln Pro Ala Ala Phe Pro Gln Ser Leu Pro
                645                 650                 655

Phe Pro Gln Ser Pro Ala Phe Pro Thr Ala Ser Pro Ala Pro Pro Gln
            660                 665                 670

Ser Pro Gly Leu Gln Pro Leu Ile Ile His His Ala Gln Met Val Gln
        675                 680                 685

Leu Gly Leu Asn Asn His Met Trp Asn Gln Arg Gly Ser Gln Ala Pro
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      Met Asp Asn Pro Gly Pro Ser Leu Arg Gly Ala Phe Gly Ile Leu
        1               5                  10                  15

ggt gcc ttg gaa agg gac agg ctg acc cac ctg aaa cac aag ctg ggg   158
Gly Ala Leu Glu Arg Asp Arg Leu Thr His Leu Lys His Lys Leu Gly
                20                  25                  30

agt ctg tgt tca ggc agc cag gag tca aag ctt ctc cat gcc atg gta   206
Ser Leu Cys Ser Gly Ser Gln Glu Ser Lys Leu Leu His Ala Met Val
            35                  40                  45
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ctc ctg gct ctg ggc cag gac acg gag gcc agg gtc tct ctg gag tcc   254
Leu Leu Ala Leu Gly Gln Asp Thr Glu Ala Arg Val Ser Leu Glu Ser
         50                  55                  60

ttg aag atg aac aca gta gcc cag ctg gta gcc cac cag tgg gca gac   302
Leu Lys Met Asn Thr Val Ala Gln Leu Val Ala His Gln Trp Ala Asp
     65                  70                  75

atg gag acc aca gag ggc cct gag gag cct cca gac ttg tcc tgg acg   350
Met Glu Thr Thr Glu Gly Pro Glu Glu Pro Pro Asp Leu Ser Trp Thr
 80                  85                  90                  95

gtg gct cgc ctg tac cac ctg ctg gct gag gag aac ctg tgt ccg gcc   398
Val Ala Arg Leu Tyr His Leu Leu Ala Glu Glu Asn Leu Cys Pro Ala
                100                 105                 110

tcc aca agg gac atg gct tac cag gtg gcc ctt cgt gac ttt gcc tcc   446
Ser Thr Arg Asp Met Ala Tyr Gln Val Ala Leu Arg Asp Phe Ala Ser
            115                 120                 125

cag ggt gac cac cag ctg ggc caa ctc cag aat gag gcc tgg gat cgg   494
Gln Gly Asp His Gln Leu Gly Gln Leu Gln Asn Glu Ala Trp Asp Arg
        130                 135                 140

tgc agt tca gat atc aag ggg gac ccc agt ggt ttc cag cca ctc cat   542
Cys Ser Ser Asp Ile Lys Gly Asp Pro Ser Gly Phe Gln Pro Leu His
    145                 150                 155

tct cat cag ggt tcc ctg cag cca cct tca gca tcc cct gca gtg acc   590
Ser His Gln Gly Ser Leu Gln Pro Pro Ser Ala Ser Pro Ala Val Thr
160                 165                 170                 175

aga agc cag cct cgt ccc att gac aca cca gac tgg agt tgg gga cat   638
Arg Ser Gln Pro Arg Pro Ile Asp Thr Pro Asp Trp Ser Trp Gly His
                180                 185                 190

acg tta cac tcc acc aac agc act gcc tca ctg gcc agc cac cta gag   686
Thr Leu His Ser Thr Asn Ser Thr Ala Ser Leu Ala Ser His Leu Glu
            195                 200                 205

atc agc cag tca ccc act ctt gcc ttt ctc tct tca cac cat gga acc   734
Ile Ser Gln Ser Pro Thr Leu Ala Phe Leu Ser Ser His His Gly Thr
        210                 215                 220

cat ggg ccc agc aag cta tgt aac aca ccg ctg gac act cag gag cct   782
His Gly Pro Ser Lys Leu Cys Asn Thr Pro Leu Asp Thr Gln Glu Pro
    225                 230                 235

cag ctt gtc cct gaa ggc tgc caa gaa cct gag gag ata agc tgg cct   830
Gln Leu Val Pro Glu Gly Cys Gln Glu Pro Glu Glu Ile Ser Trp Pro
240                 245                 250                 255

cca tca gtg gag acc agt gtc tcc tta ggg tta cca cac gaa att agc   878
Pro Ser Val Glu Thr Ser Val Ser Leu Gly Leu Pro His Glu Ile Ser
                260                 265                 270
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gtt cca gag gtg tct cca gag gag gct tcg ccc atc ctc cct gac gcc   926
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            275                 280                 285

ctg gct gct cca gac aca agt gtc cac tgt ccc att gaa tgc aca gag   974
Leu Ala Ala Pro Asp Thr Ser Val His Cys Pro Ile Glu Cys Thr Glu
        290                 295                 300

ttg tct aca aac tcc agg tct ccc ctg acg tcc acc aca gaa agt gtt   1022
Leu Ser Thr Asn Ser Arg Ser Pro Leu Thr Ser Thr Thr Glu Ser Val
    305                 310                 315

gga aag cag tgg cct att aca agt cag agg tca cct cag gtt cct gta   1070
Gly Lys Gln Trp Pro Ile Thr Ser Gln Arg Ser Pro Gln Val Pro Val
320                 325                 330                 335

gga gat gat tct ctg cag aac acc acg tca tcc agc cct cct gcc cag   1118
Gly Asp Asp Ser Leu Gln Asn Thr Thr Ser Ser Ser Pro Pro Ala Gln
                340                 345                 350

cca cca tcc ctc caa gcc tcc cct aag ctg cct cct tcc cct ctg tcc   1166
Pro Pro Ser Leu Gln Ala Ser Pro Lys Leu Pro Pro Ser Pro Leu Ser
            355                 360                 365

tct gct tcc tcc ccg agc agc tac cct gct cct cca acc tcc aca tcc   1214
Ser Ala Ser Ser Pro Ser Ser Tyr Pro Ala Pro Pro Thr Ser Thr Ser
        370                 375                 380

cct gtt ttg gac cac tca gaa aca tct gat cag aaa ttc tat aac ttt   1262
Pro Val Leu Asp His Ser Glu Thr Ser Asp Gln Lys Phe Tyr Asn Phe
    385                 390                 395

gtg gtt atc cat gcc agg gct gat gaa cag gtg gcc cta cgt att cgg   1310
Val Val Ile His Ala Arg Ala Asp Glu Gln Val Ala Leu Arg Ile Arg
400                 405                 410                 415

gag aag ctg gag acc ctc ggg gta cct gac ggg gcc acc ttc tgt gag   1358
Glu Lys Leu Glu Thr Leu Gly Val Pro Asp Gly Ala Thr Phe Cys Glu
                420                 425                 430

gaa ttt cag gtg ccc ggg cgt ggt gag ctg cac tgt ctc caa gat gcc   1406
Glu Phe Gln Val Pro Gly Arg Gly Glu Leu His Cys Leu Gln Asp Ala
            435                 440                 445

atc gat cac tcg ggg ttc acg atc ctg ctc ctg act gct agc ttt gat   1454
Ile Asp His Ser Gly Phe Thr Ile Leu Leu Leu Thr Ala Ser Phe Asp
        450                 455                 460

tgc agc ctg agc ctg cat caa atc aac cat gct ctc atg aac agc ctt   1502
Cys Ser Leu Ser Leu His Gln Ile Asn His Ala Leu Met Asn Ser Leu
    465                 470                 475

aca cag tct ggg agg cag gac tgt gtg atc ccc ctc ctc cca ctt gag   1550
Thr Gln Ser Gly Arg Gln Asp Cys Val Ile Pro Leu Leu Pro Leu Glu
480                 485                 490                 495
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tgt tct cag gcc cag ctc agc cca gat aca acc aga ctg ctc cac agc   1598
Cys Ser Gln Ala Gln Leu Ser Pro Asp Thr Thr Arg Leu Leu His Ser
                500                 505                 510

att gtg tgg ctg gat gaa cac tcc cca atc ttc gcc aga aag gtg gca   1646
Ile Val Trp Leu Asp Glu His Ser Pro Ile Phe Ala Arg Lys Val Ala
            515                 520                 525

aac acc ttc aag aca cag aag ctc cag gca cag cgg gta cgc tgg aag   1694
Asn Thr Phe Lys Thr Gln Lys Leu Gln Ala Gln Arg Val Arg Trp Lys
        530                 535                 540

aaa gcg cag gag gcc aga acc ctc aag gag cag agc ata cag ctg gag   1742
Lys Ala Gln Glu Ala Arg Thr Leu Lys Glu Gln Ser Ile Gln Leu Glu
    545                 550                 555

gca gag cgg caa aac gtg gca gcc ata tct gct gcc tac aca gcc tat   1790
Ala Glu Arg Gln Asn Val Ala Ala Ile Ser Ala Ala Tyr Thr Ala Tyr
560                 565                 570                 575

gtc cat agc tat agg gcc tgg caa gca gag atg aac aaa ctt ggg gtg   1838
Val His Ser Tyr Arg Ala Trp Gln Ala Glu Met Asn Lys Leu Gly Val
                580                 585                 590

gct ttt ggg aag aac ttg tca ctg ggg act cca aca ccc agc tgg ccc   1886
Ala Phe Gly Lys Asn Leu Ser Leu Gly Thr Pro Thr Pro Ser Trp Pro
            595                 600                 605

gga tgt cca cag cca ata cct tct cat cct cag ggt ggt act cca gtt   1934
Gly Cys Pro Gln Pro Ile Pro Ser His Pro Gln Gly Gly Thr Pro Val
        610                 615                 620

ttc ccc tat tcc cca cag cct cca tcc ttc cct cag cct cca tgc ttc   1982
Phe Pro Tyr Ser Pro Gln Pro Pro Ser Phe Pro Gln Pro Pro Cys Phe
    625                 630                 635

cct cag cct cca tcc ttc cct cag cct cca tcc ttc cca ctg cct cca   2030
Pro Gln Pro Pro Ser Phe Pro Gln Pro Pro Ser Phe Pro Leu Pro Pro
640                 645                 650                 655

gtc tct tcc cca cag tcc caa tcc ttt cca tca gcc tcc tcc cca gcc   2078
Val Ser Ser Pro Gln Ser Gln Ser Phe Pro Ser Ala Ser Ser Pro Ala
                660                 665                 670

cca cag act cca gga cct cag cct ctc att att cac cat gcc cag atg   2126
Pro Gln Thr Pro Gly Pro Gln Pro Leu Ile Ile His His Ala Gln Met
            675                 680                 685

gtt cag ctg ggt gtc aac aat cac atg tgg ggc cac aca ggg gcc cag   2174
Val Gln Leu Gly Val Asn Asn His Met Trp Gly His Thr Gly Ala Gln
        690                 695                 700

tca tct gat gac aag act gag tgt tcg gag aac ccc tgt atg ggc cct   2222
Ser Ser Asp Asp Lys Thr Glu Cys Ser Glu Asn Pro Cys Met Gly Pro
    705                 710                 715
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ctg act gat cag ggc gaa ccc ctt ctt gag act cca gag tgaccaggtt    2271
Leu Thr Asp Gln Gly Glu Pro Leu Leu Glu Thr Pro Glu
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            20                  25                  30

Leu Cys Ser Gly Ser Gln Glu Ser Lys Leu Leu His Ala Met Val Leu
        35                  40                  45

Leu Ala Leu Gly Gln Asp Thr Glu Ala Arg Val Ser Leu Glu Ser Leu
    50                  55                  60

Lys Met Asn Thr Val Ala Gln Leu Val Ala His Gln Trp Ala Asp Met
65                  70                  75                  80

Glu Thr Thr Glu Gly Pro Glu Glu Pro Pro Asp Leu Ser Trp Thr Val
                85                  90                  95

Ala Arg Leu Tyr His Leu Leu Ala Glu Glu Asn Leu Cys Pro Ala Ser
            100                 105                 110

Thr Arg Asp Met Ala Tyr Gln Val Ala Leu Arg Asp Phe Ala Ser Gln
        115                 120                 125

Gly Asp His Gln Leu Gly Gln Leu Gln Asn Glu Ala Trp Asp Arg Cys
    130                 135                 140

Ser Ser Asp Ile Lys Gly Asp Pro Ser Gly Phe Gln Pro Leu His Ser
145                 150                 155                 160

His Gln Gly Ser Leu Gln Pro Pro Ser Ala Ser Pro Ala Val Thr Arg
                165                 170                 175

Ser Gln Pro Arg Pro Ile Asp Thr Pro Asp Trp Ser Trp Gly His Thr
            180                 185                 190

Leu His Ser Thr Asn Ser Thr Ala Ser Leu Ala Ser His Leu Glu Ile
        195                 200                 205

Ser Gln Ser Pro Thr Leu Ala Phe Leu Ser Ser His His Gly Thr His
    210                 215                 220

Gly Pro Ser Lys Leu Cys Asn Thr Pro Leu Asp Thr Gln Glu Pro Gln
225                 230                 235                 240
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Leu Val Pro Glu Gly Cys Gln Glu Pro Glu Glu Ile Ser Trp Pro Pro
                  245                 250                 255

Ser Val Glu Thr Ser Val Ser Leu Gly Leu Pro His Glu Ile Ser Val
             260                 265                 270

Pro Glu Val Ser Pro Glu Glu Ala Ser Pro Ile Leu Pro Asp Ala Leu
         275                 280                 285

Ala Ala Pro Asp Thr Ser Val His Cys Pro Ile Glu Cys Thr Glu Leu
     290                 295                 300

Ser Thr Asn Ser Arg Ser Pro Leu Thr Ser Thr Thr Glu Ser Val Gly
305                 310                 315                 320

Lys Gln Trp Pro Ile Thr Ser Gln Arg Ser Pro Gln Val Pro Val Gly
                  325                 330                 335

Asp Asp Ser Leu Gln Asn Thr Thr Ser Ser Ser Pro Pro Ala Gln Pro
             340                 345                 350

Pro Ser Leu Gln Ala Ser Pro Lys Leu Pro Pro Ser Pro Leu Ser Ser
         355                 360                 365

Ala Ser Ser Pro Ser Ser Tyr Pro Ala Pro Pro Thr Ser Thr Ser Pro
     370                 375                 380

Val Leu Asp His Ser Glu Thr Ser Asp Gln Lys Phe Tyr Asn Phe Val
385                 390                 395                 400

Val Ile His Ala Arg Ala Asp Glu Gln Val Ala Leu Arg Ile Arg Glu
                  405                 410                 415

Lys Leu Glu Thr Leu Gly Val Pro Asp Gly Ala Thr Phe Cys Glu Glu
             420                 425                 430

Phe Gln Val Pro Gly Arg Gly Glu Leu His Cys Leu Gln Asp Ala Ile
         435                 440                 445

Asp His Ser Gly Phe Thr Ile Leu Leu Leu Thr Ala Ser Phe Asp Cys
     450                 455                 460

Ser Leu Ser Leu His Gln Ile Asn His Ala Leu Met Asn Ser Leu Thr
465                 470                 475                 480

Gln Ser Gly Arg Gln Asp Cys Val Ile Pro Leu Leu Pro Leu Glu Cys
                  485                 490                 495

Ser Gln Ala Gln Leu Ser Pro Asp Thr Thr Arg Leu Leu His Ser Ile
             500                 505                 510

Val Trp Leu Asp Glu His Ser Pro Ile Phe Ala Arg Lys Val Ala Asn
         515                 520                 525

Thr Phe Lys Thr Gln Lys Leu Gln Ala Gln Arg Val Arg Trp Lys Lys
     530                 535                 540
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Ala Gln Glu Ala Arg Thr Leu Lys Glu Gln Ser Ile Gln Leu Glu Ala
545                 550                 555                 560

Glu Arg Gln Asn Val Ala Ala Ile Ser Ala Ala Tyr Thr Ala Tyr Val
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His Ser Tyr Arg Ala Trp Gln Ala Glu Met Asn Lys Leu Gly Val Ala
            580                 585                 590

Phe Gly Lys Asn Leu Ser Leu Gly Thr Pro Thr Pro Ser Trp Pro Gly
        595                 600                 605

Cys Pro Gln Pro Ile Pro Ser His Pro Gln Gly Gly Thr Pro Val Phe
    610                 615                 620

Pro Tyr Ser Pro Gln Pro Pro Ser Phe Pro Gln Pro Pro Cys Phe Pro
625                 630                 635                 640

Gln Pro Pro Ser Phe Pro Gln Pro Pro Ser Phe Pro Leu Pro Pro Val
                645                 650                 655

Ser Ser Pro Gln Ser Gln Ser Phe Pro Ser Ala Ser Ser Pro Ala Pro
            660                 665                 670

Gln Thr Pro Gly Pro Gln Pro Leu Ile Ile His His Ala Gln Met Val
        675                 680                 685

Gln Leu Gly Val Asn Asn His Met Trp Gly His Thr Gly Ala Gln Ser
    690                 695                 700

Ser Asp Asp Lys Thr Glu Cys Ser Glu Asn Pro Cys Met Gly Pro Leu
705                 710                 715                 720

Thr Asp Gln Gly Glu Pro Leu Leu Glu Thr Pro Glu
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Phe Leu Gln Leu Arg Asp Ala Thr Pro Gly Gly Ala Ile Val Ser Glu
35 40 45

Leu Cys Gln Ala Leu Ser Ser Ser His Cys Arg Val Leu Leu Ile Thr
50 55 60

Pro Gly Phe Leu Gln Asp Pro Trp Cys Lys Tyr Gln Met Leu Gln Ala
65 70 75 80

Leu Thr Glu Ala Pro Gly Ala Glu Gly Cys Thr Ile Pro Leu Leu Ser
85 90 95

Gly Leu Ser Arg Ala Ala Tyr Pro Pro Glu Leu Arg Phe Met Tyr Tyr
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Val Met Arg Cys
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Cys Val Ser Asp Arg Asp Val Leu Pro Gly Thr Cys Val Trp Ser Ile
35 40 45

Ala Ser Glu Leu Ile Glu Lys Arg Cys Arg Arg Met Val Val Val Val
50 55 60

Ser Asp Asp Tyr Leu Gln Ser Lys Glu Cys Asp Phe Gln Thr Lys Phe
65 70 75 80

Ala Leu Ser Leu Ser Pro Gly Ala His Gln Lys Arg Leu Ile Pro Ile
85 90 95

Lys Tyr Lys Ala Met Lys Lys Glu Phe Pro Ser Ile Leu Arg Phe Ile
100 105 110

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Thr Val Cys Asp Tyr Thr Asn Pro Cys Thr Lys Ser Trp Phe Trp Thr
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Arg Leu Ala Lys Ala Leu Ser Leu Pro
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